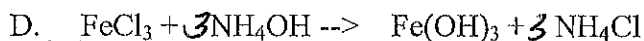
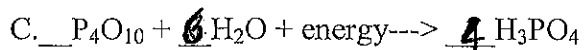
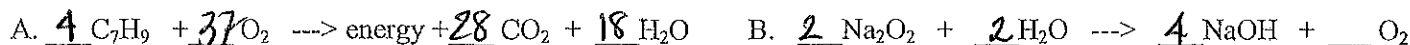


Chapter 10 Chem review.

1. Balance the following equations



2. List the reactants in 1C. P₄O₁₀ and H₂O (energy too.)

3. List the products in 1D. Fe(OH)₃ and NH₄Cl

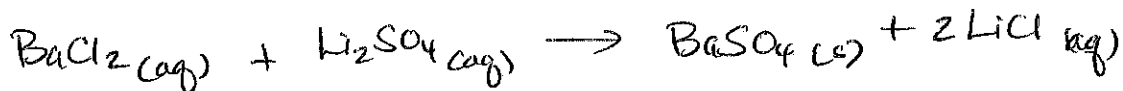
4. Which equation in #1 is Endothermic? or Exothermic? X

5. How does a balanced chemical equation demonstrate the Law of Conservation of Mass?

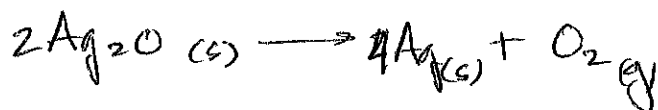
A balanced chemical equation contains an equal amount of each atom on each side. Because each atom has a characteristic mass, both atom type and mass are conserved.

6. Write, balance and determine the type of each of the following chemical equations. Note the physical state of each reactant and product.

a. Aqueous barium chloride combines with aqueous lithium sulfate to form solid barium sulfate and aqueous lithium chloride. Type Double Replacement.



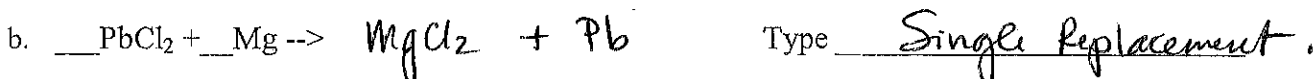
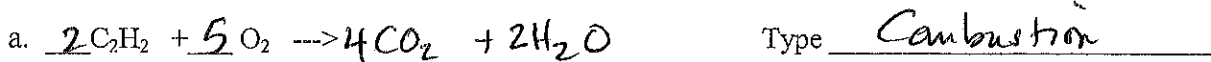
b. Solid silver oxide breaks down to form silver metal and oxygen gas. Type Decomposition

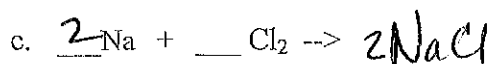


7. Determine the physical states of the following ionic compounds.

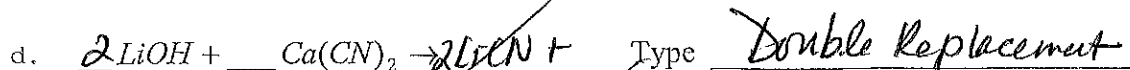
Lithium phosphate Aq MgCO₃ S Barium iodide aq (NH₄)₂S aq

8. Predict the products of the following chemical reactions, balance the reaction and determine its type.





Type Synthesis

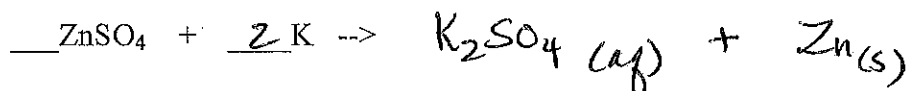
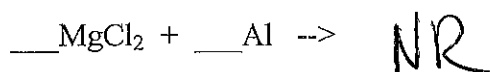


NR - Both products are aqueous.



Type Decomposition

9. Which of the following single replacement reactions will take place? If they take place, predict the products and their physical states (if possible).



In each of the following pairs, which element will replace the other in a reaction?

- tin and sodium
- fluorine and iodine
- lead and silver
- copper and nickel

An aqueous solution of nickel (II) sulfate is mixed with aqueous sodium hydroxide. Will a visible reaction occur? (formation of a precipitate)

- No, solid nickel (II) hydroxide is soluble in water
 - No, solid sodium sulfate is soluble in water
 - Yes, solid sodium sulfate will precipitate out of solution
 - Yes, solid nickel (II) hydroxide will precipitate out of solution
1. When sodium metal (silver in color) and chlorine gas (yellow) are mixed in a flask, a violent explosion takes place that results in the formation of sodium chloride (white salt). The reaction flask must be left to cool for a considerable amount of time following the reaction before the salt can be observed.

What are the two indications that a chemical change has taken place between sodium and chlorine?

Change in Color
• Silver + yellow = white

Change in Temperature
• Explosions are hot!
• Time to cool.